

## COLUMBIA RIVER CROSSING PROJECT UPDATE

### BRIEFING PAPER

Prepared for the  
April 2005 Transportation Commission Meeting

Prepared by: Doug Ficco, Project Co-Director, Columbia River Crossing

Reviewed by: Don Wagner, SW Regional Administrator

Approved by: John Conrad, Assistant Secretary for Engineering & Regional Operations

### PURPOSE:

Provide the full Commission with an update on the Columbia River Crossing Project.

### ACTION/OUTCOME:

No action required.

### BACKGROUND:

The Columbia River Crossing (CRC) is a bi-state project to expand highway capacity and provide high capacity transit over the Columbia River between Vancouver, Washington and Portland, Oregon. The Oregon and Washington Departments of Transportation jointly lead the project.

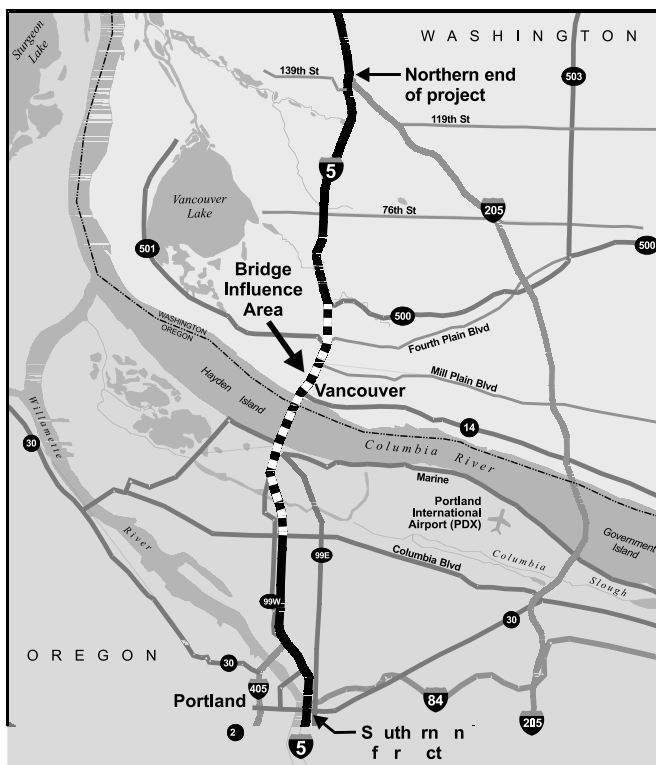


Figure 1: Project Study Area

### Project Location

The project study area (Figure 1) starts at the interchange of I-5 and I-205 in Clark County, and extends south to the interchange of I-5 and I-84 in Portland.

A smaller area called the “Bridge Influence Area” is defined generally as the I-5 corridor between SR-500 in Washington and Columbia Blvd. in Oregon.

The primary focus of study has been the I-5 corridor and the I-5 Interstate Bridge over the Columbia River. However, the study has also looked at the I-205 corridor and the Glenn Jackson Bridge because the two river crossings work together to serve the Portland/Vancouver metropolitan area.

## Regional Growth – People and Traffic

Over the last 88 years, since the opening of the first two-lane Pacific Highway bridge (now the I-5 bridge) over the Columbia, our population in the Portland/Vancouver region has grown about six-fold, but our travel has grown by about *300 times*.

There are *two million* cars and trucks in the region—that is *100 times more* than in 1917. And, because we now drive much greater distances, as a region we are driving *300 times more miles* every day than our ancestors did in 1917.

1917: Pacific Highway Bridge Opens	Growth	2005 - Today
2 lanes	6 x more	12 lanes
350,000 people in region	6 x more	2 million people in region
Fewer than 20,000 vehicles owned	100 x more	2 million vehicles
100,000 miles traveled (est.)	300 x more	30 million miles traveled

Figure 2: Eighty-eight years of regional growth

## Travel Growth in the I-5 Corridor

Significant growth is expected over the next several years as well (projected to increase by more than 20% between 2002 and 2020) and is depicted in Figure 3.

Scenario	Daily - Weekday			AM Peak 3 Hours - Weekday			PM Peak 4 Hours - Weekday		
	I-5	I-205	Total	I-5	I-205	Total	I-5	I-205	Total
TRAFFIC VOLUMES (Vehicles per Day)									
Existing (2002)	124,000	136,000	260,000	22,500	28,700	51,200	35,800	43,100	78,900
2020 No-Build	140,400	155,200	295,600	24,800	32,700	57,500	39,400	49,200	88,600
2020 Build	178,600	136,100	314,700	33,600	28,300	61,900	53,300	42,250	95,550

Figure 3: Projected travel growth

## Recent Project Work

In response to growing congestion in the I-5 corridor, the governors of Washington and Oregon appointed a bi-state committee in 1998 to begin to address the problem. The committee's report, *The Portland/Vancouver I-5 Trade Corridor Freight Feasibility and Needs Assessment Study*, released in 1999, emphasized the urgent need for action in the I-5 corridor to solve current problems and handle future growth. As a follow on to that work, *The I-5 Transportation and Trade Partnership Strategic Plan* explored river crossing options and developed a set of recommendations for further study.

Both the *Trade Corridor Study* and the *Strategic Plan* concluded that traditional sources of funding—federal and state highway and transit funds—may not be adequate to build this project. Those studies encouraged the DOTs to investigate all potential funding sources, including the use of tolls.

## **DISCUSSION:**

Currently, Oregon and Washington are finalizing additional preliminary analysis of crossing options and funding issues in preparation for the National Environmental Policy Act Scoping process. Scoping will revisit and affirm or modify prior recommendations. In addition, new ideas or concepts may emerge. As we move into the scoping process, we are increasing efforts to inform and engage local and regional leadership and interest groups.

### **Columbia River Crossing Task Force**

The Task Force, co-chaired by Washington State University Chancellor Hal Dengerink and former Oregon Transportation Commission Chair Henry Hewitt, held its first meeting February 3. Project staff briefed members on the 2002 I-5 Transportation and Trade Partnership recommendations and provided an overview of the National Environmental Policy Act (NEPA) process.

The 38-member Task Force includes leaders from Oregon and Washington's community, business, civic, neighborhood, freight, commuter and environmental agencies and groups. The Task Force will consider a variety of issues including commuter congestion, freight movement, funding, high capacity transit and environmental issues. The Task Force is charged with providing advice and bi-state consensus regarding the project to the Joint Commission Subcommittee.

The Task Force will meet quarterly over the next two to three years, coinciding with the project's NEPA process. The next meet is May 4, 2005.

### **Consultant Procurement**

A "Request for Qualifications (RFQ)" for the project was released mid-February 2005. The RFQ was posted on the WSDOT Web site and appeared in the Seattle *Daily Journal of Commerce*. The selected consultant team headed by David Evans and Associates, Inc. will work collaboratively with the WSDOT/ODOT Project Team. They are responsible for providing environmental and design services to deliver the environmental phase of the Project.

Key partnering firms on the team also include Parsons Brinkerhoff, Parametrix, CH2M Hill and the JD White Company. The team brings an unparalleled understanding of local and regional issues, as well as national expertise in bi-state and other FHWA mega projects. Nationally, the firms have been responsible for developing a wide range of signature projects that include major river crossings, transit, and tolling elements.

### **Funding**

This project expects to enter the EIS phase (or other required environmental documentation, if an EIS is not required) this summer. The estimated cost of the environmental phase is in excess of \$20 million, with an initial agreement in excess of \$6 million.

## **Preliminary Tolling Study Results**

The CRC team has studied tolling from a revenue projection standpoint only. During this preliminary work, the team has considered a number of issues related to potential tolling, including: what to toll (one crossing or two); how and where to collect potential tolls; potential toll rate policies and revenues; and legal issues governing tolling.

Attached is a supplemental briefing paper on the results of the tolling analysis in the last year and we will provide more detail during the Commission meeting. This work supports decisions about what should be studied in the CRC project's Environmental Impact Statement, and is not intended to make final project recommendations. This work focused primarily on the financial aspect of this project and is considered a revenue projection analysis only. The work has not yet been vetted from a political and environmental perspective.

### **FOR FURTHER INFORMATION:**

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Attachment

## TOLLING AS A POTENTIAL FUNDING OPTION

April 2005 Transportation Commission Meeting

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The CRC study team considered a number of issues related to potential tolling, including: what to toll—one crossing or two; where to collect potential tolls; how to collect potential tolls (electronic toll collection (ETC), manual toll collection, and a combination); potential toll rate policies and revenues; and legal issues governing tolling.

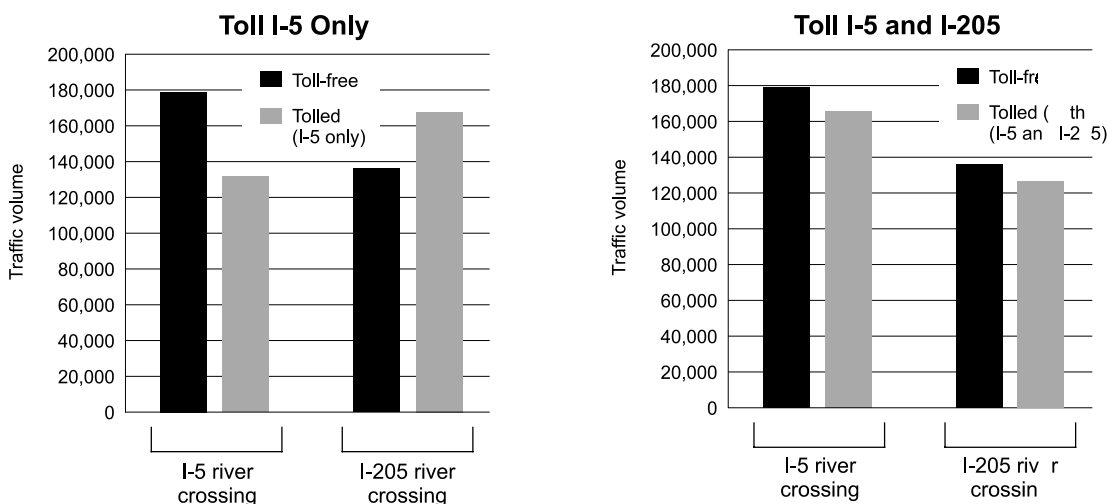
Following is a brief summary of the results of the tolling analysis in the last year. More detail will be provided during the Commission meeting. This work supports decisions about what should be studied in the CRC project's Environmental Impact Statement, and is not intended to make final project recommendations. This work has focused primarily on the financial aspect of this project and is viewed as a revenue projection analysis only. The work has not yet been vetted from a political and environmental perspective.

### **Tolling I-5 Bridge Only or Tolling Both I-5 and I-205 Bridges**

Recent analysis looked at two potential options for potentially tolling the CRC.

- Option 1: **Toll the I-5 Bridge Only**, with full tolls collected both northbound and southbound on I-5.
- Option 2: **Toll both the I-5 and I-205 bridges**, full tolls collected in one direction only, northbound *or* southbound.

**Traffic Diversion.** Traffic patterns clearly show that the two Columbia River crossings function as a single corridor, and that changes on one bridge—adding capacity and/or imposing tolls—will affect the traffic patterns of both bridges. Figure 1 compares the projected traffic volumes for the two options.



**Figure 1:** 2020 traffic volumes on I-5 and I-205 bridges, under two tolling options. All options assume new capacity has been constructed over the Columbia River.

The figure also illustrates the traffic diversion issues associated with the two potential tolling options. Under both options, there will be more traffic crossing the river than today, but less than it would be if new capacity is built and the crossing is not tolled.

If only the I-5 bridge is tolled, traffic models indicate significant trip diversion to I-205, which may result in the underutilization of the new I-5 crossing. These preliminary findings must be investigated in the Draft Environmental Impact Statement.

## Collecting Tolls

Tolling the I-5 crossing may require one or more toll plazas. Toll plazas would not be necessary if all tolls were paid using high-speed electronic toll collection (ETC) lanes.

Locating toll plazas would be a major challenge. Between historic resources, public parks, residential neighborhoods and commercially developed parcels, this project will be threading a needle on both sides of the river.

To date, toll plaza evaluations for this project assumed, based on traffic projections, that two or three ETC lanes plus 10-14 manual toll lanes could be required for each plaza. It also assumed that initially many drivers would pay tolls manually; after seven years about 65% of bridge users would use electronic toll collection lanes, using a transponder.

## Toll Rate Policy Assumptions and Revenues

To forecast toll revenues, the study established some assumptions regarding toll rate policies. **These assumptions are not intended to represent recommendations regarding future rates—they were developed for analysis only.** For this study, the assumptions were slightly different than those guiding the Tacoma Narrows Bridge. Figure 2 provides a comparison.

Assumption	Columbia River Crossing	Tacoma Narrows Bridge
One-way vs. two-way collection	Toll I-5 only: Two-way Toll I-5 and I-205: One-way	One-way
Toll plaza location	Two way collection on I-5; one way collection on I-5 & I-205. Options for both WA and OR.	6 booths + 3 ETC lanes for one-way collection; 45,000 ADT one way.
ETC discounts	15% for cars & commercial vehicles; 100% for transit	No discount. Offering minimal free trips when transponder is purchased.
Discount for ETC frequent users	15% discount	Study to be conducted.
Forecast ETC market share	65% by 7 years after opening	55% on opening day
Vehicle class rate differentials	Number of axles using N-1 formula	Number of axles
Time of day differential	No	Study to be conducted
HOV discounts	50% for HOV with ETC (HOV = 3+ riders)	No discount.
Toll escalation	3% per year (increase in 25¢ increments only every 2 to 3 years)	\$3 on opening day. Raise \$1 every 4 years to a max. of \$6. Adjusted as necessary to repay bonds.

**Figure 2:** Columbia River Crossing and Tacoma Narrows Bridge assumptions

### **Toll Revenue Projections**

Using the current assumptions, tolling both the I-5 and I-205 bridges would raise about 10-15 percent more revenue compared to tolling I-5 only. (If only I-5 is tolled, each round trip driver pays twice as much, but if both bridges are tolled, every driver pays, which generates more revenue overall.) In all options studied, tolls would generate a *minimum* of about \$100 million a year in the first year (this is based on a starting toll rate of \$2 in 2002 dollars). Over the course of 30 years toll revenue would be sufficient to cover bond payments and operations for a project in excess of \$1 billion.

### **Legal Issues Relating to Tolling**

While more work is necessary in relation to the legal issues associated with tolling, we know today that:

- Federal authority exists to toll the I-5 bridge option whether we replace or supplement the existing I-5 structure within the current corridor.
- No federal authority exists to toll I-205, except under special circumstances. We are currently investigating these circumstances.
- Washington and Oregon tolling statutes are not currently consistent, and issues relating to a bi-state project and a project tolling authority would have to be resolved.